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Shaping and protecting Seattle's built and natural environment

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One-Year Anniversary of Nisqually Earthquake: **Update on Building Damage and Repair**

February 27, 2002

As the first anniversary of the Nisqually Earthquake nears, the Department of Design, Construction and Land Use(DCLU) looks back on a busy year of helping the people of Seattle recover. The February 28, 2001 temblor was the most damaging to hit Seattle in more than over 35 years. Although smaller than future quakes predicted for the region, DCLU is encouraged by the fact that the Nisqually quake caused little or no damage to buildings constructed to recent building codes.

In the first two weeks following the earthquake, DCLU engineers and inspectors evaluated approximately 1,500 buildings with earthquake damage estimated at \$67 million. DCLU posted red and yellow tags on more than 600 buildings, restricting or prohibiting access. These inspections were requested by building owners and occupants; it is known that many more buildings were damaged as well.

As of January 31, 2002, the department had issued 441 permits for more than \$37 million in earthquake repairs, including a number of buildings not initially inspected by the City. Staff continues to receive new applications for repairs, with many projects just now getting underway. Securing funding and developing plans are the two main reasons cited by building owners for the time it has taken to start repairs.

DCLU staff points to several general conclusions that can be drawn from the Nisqually quake, generally confirming industry-wide perceptions.

- Older, unreinforced masonry buildings are particularly vulnerable to seismic activity, both the building structure and its appendages, including unbraced parapets. The same holds true for unreinforced masonry chimneys on both residential and commercial buildings. Failed chimneys represented the main damage to residences, followed by foundation damage to homes in landslide prone areas. Some jurisdictions in California no longer allow the reconstruction of masonry chimneys.
- Older, unreinforced buildings on soil subject to liquefaction are vulnerable. The highest concentration of damaged buildings was found in the Pioneer Square, SODO and International District areas, the location of many unreinforced buildings and

Nisqually Earthquake by the **Numbers**

When:

10:54 a.m., February 28, 2001

Size:

Richter Magnitude of 6.8

Tagged Buildings in Seattle

(view map - 1,575kb PDF; zoom in to see red and yellow tagged areas):

- Red Tagged (Prohibited Access) Most - 42 Current - 17
- Yellow Tagged (Limited Access) Most - 569 Current - 204

Repair Permits Issued:

441 permits Value: \$37 million

Applications in Process as of January 31, 2002:

24 applications Value: \$1 million liquefaction soils.

Successful lessons learned by the department:

- Set up a permit system specifically to handle earthquake repair permits. Within a week of the quake, DCLU contracted for assistance from an outside engineering firm, allowing the department to establish a separate, expedited permit process for earthquake repairs while maintaining normal service for regular building permits. In 2001, DCLU accepted applications for projects worth more than \$1.8 billion, and approved permits for projects valuing more than \$1.7 billion.
- Set up coordination early on with other organizations critical to the repair approval process. Immediately following the quake, the Department of Neighborhood Urban Preservation staff began working with DCLU staff on a daily basis to approve repairs in buildings protected by historic preservation regulations.

Getting More Information

For additional information, visit the <u>DCLU</u>
<u>Earthquake Information Center</u> or contact:

Alan Justad DCLU Community Relations (206) 233-3891 alan.justad@ci.seattle.wa.us

The Department of Planning and Development (DPD) is located in Seattle Municipal Tower (formerly Key Tower) at 700 Fifth Avenue in downtown Seattle (details).

Mailing Address: DPD, 700 5th Ave Suite 2000, P.O. Box 34019, Seattle, WA 98124-4019

NOTE: New Mailing Addresses for Downtown City of Seattle Offices

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